

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****NETWORK PASSWORD RESET SYSTEM**

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**FIELD OF THE INVENTION**

The present invention relates generally to information  
10 processing systems and more particularly to a methodology  
and implementation for resetting passwords in distributed  
network systems.

15 **BACKGROUND OF THE INVENTION**

The continually increasing use and development of networks,  
including the Internet as well as local area networks  
(LANs), has created a massive communication system in which  
20 any one computer machine or system is able to communicate  
with almost any other machine in any country of the world.  
The term "machine" as used herein refers to computer systems  
which may be operating as user terminals or network servers.  
The evolution of networks and computer systems has also  
25 created an environment in which many different operating  
systems and computer machines exist and each machine needs  
to be able to have access to other machines which in many  
cases have different operating systems. Moreover, each  
different operating system will have application programs  
30 created to work specifically with that particular operating  
system. Programs written to operate with one operating

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system may not have corresponding programs written to operate on different operating systems.

Through the use of inter-connected networked systems, users  
5 on one system are able to have access to and utilize  
resources which are available on machines located elsewhere  
in the network. Such systems however, require relatively  
intricate security routines to insure that only authorized  
users have access to available network resources. The  
10 security and access functions are provided through the use  
of special access programs, including web-based password  
reset tools, to manage user ID and password processing and  
access to network resources at local and remote network  
sites.

15 However, current web-based password reset tools can only be  
installed on certain operating systems. For example, an  
existing version of "HelpNow! EasyAccess 2.0™" (HNEA) can  
only be installed on a server running Microsoft Windows NT  
20 4.0™, and the server clients are only clients running  
Windows 95™, Windows 98™, Windows NT™ and Windows 2000™  
operating systems. HNEA operates as web-based password reset  
tool to reset the passwords of user IDs that are created in  
Windows NT and Windows 2000, HPUX™, AIX™, Sun Solaris™, MVST™  
25 and Novell Netware™ systems. Even though the end user must  
have a user ID to log on to the HNEA application, the user  
ID of each networking environment already exists  
independently of the HNEA application. Only the user ID of  
the HNEA application is created from HNEA. The other user  
30 IDs are created in their own respective environments. For

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example, the user ID of an AIX environment must be created on AIX, not HNEA.

Thus, there is a need for an improved web based password  
5 reset tool that is capable of resetting passwords for user  
IDs created in OS/2 systems.

#### **SUMMARY OF THE INVENTION**

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A method and implementing system are provided in which, in  
an exemplary embodiment, a web based password reset tool  
includes means for resetting passwords for OS/2 user IDs. In  
the illustrated example, an OS/2 environment is contacted  
15 using TCP/IP (Transport Control Protocol) over NetBIOS  
(Network Basic Input Output System). NetBIOS packets are  
passed through routers into the NetBIOS network. The user ID  
and new passwords are issued and passed to the OS/2 server  
to be set. After the OS/2 server sets the password, the new  
20 password will be sent back to the password reset tool for  
access and/or display to the user requesting the new  
password.

#### **25 BRIEF DESCRIPTION OF THE DRAWINGS**

A better understanding of the present invention can be  
obtained when the following detailed description of a  
preferred embodiment is considered in conjunction with the  
30 following drawings, in which:

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Figure 1 is an illustration of an exemplary network system;

Figure 2 is a schematic diagram of an exemplary computer system; and

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Figure 3 is a flowchart illustrating an exemplary methodology implemented in one embodiment of the present invention;

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#### DETAILED DESCRIPTION

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The various methods discussed herein may be implemented within an exemplary distributed information processing system as illustrated in Figure 1. As shown, an exemplary information processing system includes first, second and third computer machines 1, 3 and 5, which are connected together in a first network configuration 6 and coupled to a network server 7. The network server 7 is, in turn, connected through a connection network 9, to one or more remote computer systems 11 and 13. Computer systems 11 and 13 may, for example, be servers at remote network sites and the connection network 9 may be the Internet. In the example, the server 13 is an OS/2 system and is connected to OS/2 client or user terminals 15, 17 and 19. In the illustrated example, server 7 is operating a Windows operating system and client or user terminals 1, 3 and 5 are also running Windows systems.

30 Referring to Figure 2, there is shown a pictorial representation of an exemplary server computer system or workstation having a central processing unit (CPU) 40 such

as a conventional microprocessor, and a number of other units interconnected via a system bus 42. The exemplary workstation shown in Figure 2 further includes a Random Access Memory (RAM) 44, a Read-Only Memory (ROM) 46, an input/output (I/O) adapter 48 for connecting peripheral devices such as storage unit 43 and one or more media devices 56 (such as floppy disks and CDs) to the bus 42. A user interface adapter 52 is shown connecting a keyboard 47, a mouse 53 and an audio system 54 (which may include speakers and microphones) to the bus 42. Other devices may also be connected to the bus 42 through the user interface adapter 52. A communications adapter 45 is shown in the example connecting the bus 42 to one or more networks, and a display adapter 51 connects a display device 50 to the main bus 42. The computer software embodiment of the present invention may be included as software installed on one of the workstations within the distributed environment illustrated. One skilled in the art will appreciate that the procedures associated with the present invention may be in the form of a computer program product on a computer readable medium, which may be temporarily or permanently loaded on the illustrated workstation from media devices 56 such as CD or floppy diskettes, and also from storage devices such as hard drive 43, and executed from RAM memory 44.

In Figure 3, there is shown a flowchart illustrating an exemplary embodiment of the methodology of the present invention. In the example, HNEA is installed on the Windows server 7 as shown in Figure 1. Code is included in HNEA to add the capability for HNEA to be able to reset the password of an OS/2 user ID. This is accomplished by creating a file

that will contact the server 13 of the OS/2 environment. To contact the OS/2 environment 301, when it is desired to reset the password of an OS/2 user ID 303, the OS/2 server 13 is contacted using TCP/IP over NetBIOS 305. This will allow using TCP/IP to pass NetBIOS packets through routers (not shown) into the NetBIOS network 307. The packets contain the administrative ID and password of the OS/2 environment and the user ID and the new password of that user ID. The administrative ID and password are necessary to contact the server with privileges that allow the administrative ID to reset passwords of other users of the OS/2 network. The user ID and new password are then issued and passed to the OS/2 server 13 to be set 309. The new user ID and new password are then set 311 and after being set 313, the password is then sent back 315 to the HNEA application on Windows server 7 for client access 315 and the process ends 317. The new password is then displayed through an email message or through the user screen display.

The method and apparatus of the present invention has been described in connection with a preferred embodiment as disclosed herein. The disclosed methodology may be implemented in many different ways in order to accomplish the desired results as herein illustrated. Although an embodiment of the present invention has been shown and described in detail herein, along with certain variants thereof, many other varied embodiments that incorporate the teachings of the invention may be easily constructed by those skilled in the art, and even included or integrated into a processor or CPU or other larger system integrated circuit or chip. The disclosed methodology may be implemented partially or totally in program code stored on

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one of many possible media carriers, or other memory device,  
from which it may be accessed and executed to achieve the  
beneficial results as described herein. Accordingly, the  
present invention is not intended to be limited to the  
5 specific form set forth herein, but on the contrary, it is  
intended to cover such alternatives, modifications, and  
equivalents, as can be reasonably included within the spirit  
and scope of the invention.

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